
**SYSTEM AND METHOD FOR EMULATING A SURFACE EKG
USING INTERNAL CARDIAC SIGNALS SENSED
BY AN IMPLANTABLE MEDICAL DEVICE**

Abstract of the Disclosure

A surface electrocardiogram (EKG) is emulated using signals detected by the internal leads of an implanted device. In one example, the emulation is performed using a technique that concatenates portions of signals sensed using different electrodes, such as by combining far-field ventricular signals sensed in the atria with far-field atrial signals sensed in the ventricles or by combining near-field signals sensed in the atria with near-field signals sensed in the ventricles. In another example, the emulation is performed using a technique that selectively amplifies or attenuates portions of a single signal sensed using a single pair of electrodes, such as by attenuating near-field portions of an atrial unipolar signal relative to far-field portions of the same signal or by attenuating atrial portions of a cross-chamber signal relative to ventricular portions to the same signal. The surface EKG emulation may be performed by the implanted device itself or by an external programmer based on cardiac signals transmitted thereto.